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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,356	08/27/2003	Nobumasa Okada	031079	3407
23850	7590	05/16/2006	EXAMINER	
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP 1725 K STREET, NW SUITE 1000 WASHINGTON, DC 20006			IVEY, ELIZABETH D	
			ART UNIT	PAPER NUMBER
			1775	

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/648,356

Applicant(s)

OKADA ET AL.

Examiner

Elizabeth Ivey

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 8-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8 and 16-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 8, applicant claims the thickness of the third layer as  $\frac{1}{4}$  wavelength but does not define the wavelength; therefore the scope of the claims with respect to thickness cannot be determined.

Regarding claims 16-18, claims merely setting forth physical characteristics desired in an article, and not setting forth specific compositions which would meet such characteristics, are invalid as vague, indefinite, and functional since they cover any conceivable combination of ingredients either presently existing or which might be discovered in future and which would impart desired characteristics. The recitation of merely optical characteristics in claims 16-18 are too broad and indefinite since they purport to cover everything which will perform the desired functions regardless of their composition, and, in effect, recite the invention by what it is desired that it does rather than what it is.—*Ex parte Slob* 157 USPQ 172.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 8-14 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S.

2001/0031365A1 to Anderson et al.

Regarding claims 8, 9 and 13, Anderson discloses optical multilayer or laminated antireflective films of alternating high and low index of refraction materials (page 2 paragraph [0026] and page 4 paragraph [0041]), creating a plurality of reflection planes. Anderson discloses that the high index of refraction layers, one of which may be considered the second layer, may be titanium oxynitride (page 2 paragraph [0029]. Anderson discloses (page 2 paragraph [0017]) that the low index of refraction layers in the antireflective film may be one or more of materials, such as magnesium fluoride, and silicon oxide. Anderson discloses low index of refraction layers having thicknesses that would be considered less than  $\frac{1}{4}$  of some wavelength (examples page 7). A chemical composition and its properties are inseparable. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 *MPEP 2112.01*. Because the prior art exemplifies the applicant's claimed composition and structure in relation to the layers, the claimed physical property relating to the stresses is inherently present in the prior art. Absent an

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objective evidentiary showing to the contrary, the addition of the claimed physical property to the claim language fails to provide patentable distinction over the prior art.

Regarding claim 10, Anderson discloses multiple layers (page 2 paragraph [0041]) allowing for a layer, to be interposed between what may be considered the first (low index) and second (high index) layers.

Regarding claim 11, Anderson discloses (page 2 paragraph [0017]) that the low index of refraction layers in the antireflective film may be one or more of silicon oxide, aluminum oxide, aluminum oxyfluoride, aluminum fluoride, and magnesium fluoride.

Regarding claim 12, Anderson discloses (page 2 paragraph [0017]) that the low index of refraction layers in the antireflective film may be silicon oxide as a first layer option.

Regarding claim 14, claim 14 is a product by process claim and the patentability of the product does not depend on its method of production. "If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." See MPEP 2113. As such, the process limitation within claim 14 does not provide patentable distinction over the prior art.

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Regarding claim 20, in table 1 Anderson discloses a film with a fourth layer having a higher index of refraction than the first layer.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application 2001/0031365 A1 to Anderson et al. as applied to claim 8 above, in view of U.S. Patent 6,222,967 B1 to Amano et al.

Regarding claim 15, Anderson discloses all of the aspects of claim 8 but does not disclose a resin sealing at least the light incident plane. Amano discloses a resin sealing structure of an optical module (column 31 lines 2-11) on a device such as an optical semiconductor (column 1 lines 55-59). Amano discloses this is important to seal the device to achieve reliability (column 1 lines 31-32). It would therefore be obvious to a person of ordinary skill in the art at the time of the invention to combine the resin seal of Amano with the disclosure of Anderson to create a reliable optical product.

Claims 16-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application 2001/0031365 A1 to Anderson et al.

Regarding claims 16-17 and 19, Anderson discloses optical multilayer or laminated antireflective films of alternating high and low index of refraction materials (page 2 paragraph [0026] and page 4 paragraph [0041]), creating a plurality of reflection planes. Anderson discloses the high index of refraction layers, one of which may be considered the second layer, may be the high index of refraction material titanium oxynitride (page 2 paragraph [0029]. Anderson discloses (page 2 paragraph [0017]) that the low index of refraction layers in the

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antireflective film may be one or more of materials such as magnesium fluoride, and silicon oxide among other materials. Anderson discloses low index of refraction layers having thicknesses that would be considered less than  $\frac{1}{4}$  of some wavelength (examples page 7).

Although Anderson does not specifically disclose the optical characteristics, such as optical transmission, exhibited by either causing or not causing a refractive index difference between an outermost layer and the air or an inert gas and does not show the characteristics to be the same, and does not disclose optical characteristics where another material is provided in contact with the outer most layer of the optical multilayer film, because the composition and structure of the device in the applicant's disclosure is the same as the disclosure in the combined prior art, the device would inherently exhibit the properties, such as optical transmission of the claimed inventions in claims 16 and 17. *MPEP 2112.02*.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application 2001/0031365 A1 to Anderson et al. as applied to claim 8 above, in view of U.S. Patent 6,222,967 B1 to Amano et al.

Regarding claim 18, Anderson discloses all of the aspects of claim 16 but does not disclose a resin. Amano discloses a resin sealing structure of an optical module (column 31 lines 2-11) on an optical device (column 1 lines 55-59). Amano discloses this is important to seal the device to achieve reliability (column 1 lines 31-32). It would therefore be obvious to a person of ordinary skill in the art at the time of the invention to combine the resin seal of Amano with the disclosure of Anderson to create a reliable optical product.

***Response to Arguments***

The examiner acknowledges applicant's amendments to the specification and cancellation of claims 1-7 and withdraws the objection to the specification and claim 10.

The examiner acknowledges applicant's amendment to claims 8 and 16.

Applicant's arguments with respect to the 112 rejections do not remedy the deficiencies of the claims.

Applicant's arguments with respect to the art rejections of claims 8-20 have been considered but they are not persuasive. Applicant has not shown any evidence that the disclosed structure would not have the same characteristics as the claimed invention.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**



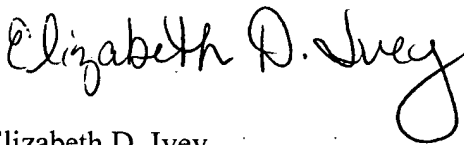
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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Ivey whose telephone number is (571) 272-8432. The examiner can normally be reached on 7:00- 4:30 M-Th and 7:00-3:30 alt. Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Elizabeth D. Ivey



JENNIFER C. MCNEIL  
SUPERVISORY PATENT EXAMINER  
5/5/06